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09/900,773	07/06/2001	Steven Michael Bellovin	12177/60501	7692

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KENYON & KENYON
One Broadway
New York, NY 10004

EXAMINER

PEREZ, ANGELICA

ART UNIT	PAPER NUMBER
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2618

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03/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/900,773	Applicant(s) BELLOVIN, STEVEN MICHAEL	
	Examiner ANGELICA M. PEREZ	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 21-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 28-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/07/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/29/2009 has been entered.

Response to Arguments

2. Applicant's arguments filed 01/29/2009 have been fully considered but they are not persuasive.

3. In the remarks, the applicant argues in substance:

(A) "Applicants respectfully submit that the applied prior art does not disclose or suggest the above highlighted claim language... As for Smith, it describes at column 10, lines 20-34, a server/base station that tracks and notifies a driver that a dead zone is approaching. The driver does not refer to any data stored within the vehicle nor is the data stored prior to the mobile communication device arriving at a prediction point. Smith does not disclose or suggest the above highlighted claim language."

In response to point (A), the examiner would like to indicate that Smith, in deed, teaches in column 11, lines 9-18, where the "dead zone" information corresponding to "structures" or "areas" that present interference to the communication in progress is "locally" stored in the "mobile unit".

(B) "Ashby does not disclose or suggest the prediction points that are set and stored by a manufacturer as recited in claim 33, or prediction points that are programmed by a subscriber and stored as recited in claim 34."

In response to argument (B), the examiner would like to indicate where "stored by the manufacturer" is broad since it does not indicate where they are stored; thus, giving a broad reasonable interpretation, the prediction points are stored by the manufacturer; however, they can be stored anywhere, the BS, a separate database, a device found in the vicinity of the area, etc. In addition, the examiner would like to point out where the reference considered in the present rejection also reads on the limitations of claims 33 and 34, as well as new claims 45 and 46.

Regarding the limitation of claim 34, please see the rejection below.

Unfortunately, the changes were not enough, and the prior art still reads on the limitations.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 2, 5, 11, 12, 13, 14 and 15 recite the limitation "the communication devices" in lines 12-13, 1-2, 2, 2, 2, 2-3, 2 and 2-3; respectively; Claim 28 recites the limitation "the mobile electronic device" in line 2; Claim 30, recites the limitation "the mobile devices" in lines 2 and 3. There is insufficient antecedent basis for these limitations in the claims.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 29 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. According to page 5, in the specification, “communication devices...may be a landline telephone, a wireless phone...a mobile communication device...” In addition, the examiner was not able to locate in the specifications the limitation “portable computer”.

Claim 28 recites “intelligent mobile electronic device”, the examiner could not find a description/definition for this limitation, in the specification.

Claim 33 recites “and stored by a manufacturer of the communication devices”

The examiner found support in page 8 where the “prediction points...can be predetermined by the manufacturer of the electronic device 23”

Claim 33 recites “and stored in the communication device”, the examiner found where the prediction points can be “adjusted” or “programmed” by the subscriber, however, it was not clear if the subscriber actually stored them in the communication device, although programming might imply the storage of the program, it is not indicated in the specifications, the user can program points by using a different device or simply using pencil and paper without having to store and/or execute the program in the device.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-9, 17, 19 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Tayloe et al. (Tayloe, US Patent No.: 6,192,240 B1) in view of Smith (Smith et al.; US patent no.: 6,721,572 B1) and further in view of Skidmore et al. (Skidmore, US Patent No.: 6,442,507 B1).

Regarding claim 1, Tayloe teaches of a method, a telecommunication system and an electronic device comprising logic to, for processing a, call, communication interruption, telephone call interruption and a telecommunication system (column 2, lines 22-38), between at least two mobile communication devices participating in an established communication (figure 2, column 1, lines 5-9; where it is inherent in the art for cellular telephone communications to operate between, at least, two mobile communication devices; column 3, lines 22-28, where in order to “end a call”, a call needs to be in progress/established; and where “wireless” devices comprise “mobile” devices) comprising the steps and means of: based on the consulting, predicting, during an established communication between the communication devices, that a connection to one of the communication devices will be interrupted (column 3, lines 22-28; e.g., “until an outage is predicted”; where an outage causes communication interruptions), and announcing, at one of the plurality of predetermined prediction points before the

connection is interrupted, that the connection to the one communication device will be interrupted (column 3, lines 22-28; where at least one of the callers involved in the communication is notified “that an outage is imminent”, before the call is terminated; where page 8, lines 21-23 in the specifications of the present application reads, “or these prediction points 43A and 43B can be determined by any of the components within the communication network”; where given a broad interpretation, the prediction points can be “predetermined” on the go, at the current position. Therefore, the prior art of record still reads on the claims).

Tayloe does not specifically teach of consulting stored data comprising a plurality of predetermined prediction points indicating a fixed structure capable of presenting an interference to the communication in progress; and where a prediction point is separated from a communication interruption point by a first predetermined time or distance interval, and a second predetermined time or distance interval between the interruption point and a connectivity point defines a no-coverage zone, the communication being capable of being re-established at or beyond the connectivity point outside the no-coverage zone.

In related art concerning a mobile communication optimization near wireless dead zone regions, Smith teaches of consulting stored data comprising a plurality of predetermined prediction points indicating a fixed structure capable of presenting an interference to the communication in progress (column 1, lines 28-40, column 3, lines 37-63; where it can be argued that a device temporarily stores/buffers the coordinates of current locations, “prediction points”, in order to calculate a distance/time of the

“interruption point”, a more specific description of how or where the stored data is kept is required); and where a prediction point is separated from an interruption point by a first predetermined time or distance interval (column 1, lines 28-40; column 11, lines 9-23. See also, column 2, lines 26-37; column 3, lines 1-20, 38-57), and a second predetermined time or distance interval between the interruption point and a connectivity point defines a no-coverage zone (column 6, lines 42-54), the communication being capable of being re-established at or beyond the connectivity point outside the no-coverage zone (column 10, lines 29-36), where the data is stored within the at least one mobile communication device prior to the mobile communication device arriving at one of the plurality of predetermined prediction points (column 11, lines 9-18, where the information is stored “locally” in the “mobile unit”).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe’s method for processing a communication interruption with Smith’s distance/time before interruption occurs in order to make better usage of resources, as taught by Smith. In addition maintaining the dead zone information in the mobile unit helps the mobile unit to make comparisons with its position and warn and determine the beginning and end of the dead zone.

Although implicitly taught in the Smith reference, the examiner is introducing a related art reference that is more explicit regarding consulting data stored within at least one of the communication devices, the data comprising a plurality of predetermined predicting points indicating a fixed structure capable of presenting an interference to the communication in progress, Skidmore presents the teachings regarding this limitation in

column 2, lines 26-45, the examiner would like to indicate that there is no detail in the claims as to how the data is stored, therefore the prior references read on the limitations because, information can be stored and consulted).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's and Smith's method for processing a communication interruption with Skidmore's presentation of art that teaches of storing fixed structure data information in order to improve communications.

Regarding claims 2 and 29, Tayloe, Smith and Skidmore teach all the limitations according to claims 1 and 28, respectively. Tayloe further teaches where at least one of the mobile communication devices is selected from a group consisting of a wireless telephone, a cellular telephone, a PDA (personal digital assistant), a portable computer and a mobile communication device (column 2, lines 64-67; where the examiner selected "cellular telephone" from the choices provided by the applicant).

Regarding claim 3, Tayloe, Smith and Skidmore teach all the limitations according to claim 1.

Smith further teaches where a prediction point indicates one of a tunnel blocking the communication, a hill obstructing the communication, an indoor feature obstructing the communication, an outdoor feature obstructing the communication (columns 1, lines 28-40).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore method for processing

a communication interruption with Smith's "dead zones" in order to have well defined prediction points, as taught by Smith.

Regarding claim 4, Tayloe, Smith and Skidmore teach all the limitations according to claim 1. Tayloe further teaches where a prediction point is derived from one of historical data, geographical data, enhanced location data, topographical data and global positioning system) (column 3, lines 43-49).

Regarding claim 5, Tayloe, Smith and Skidmore teach all the limitations according to claim 4.

Smith further teaches where the historical data is collected from at least one subscriber using the communication device along a path and analyzing the communication patterns, including interruptions, along the path (column 2, lines 6-34).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Smith's analyzing of the collected data in order to "anticipate connection problems", as taught by Smith.

Regarding claim 6, Tayloe, Smith and Skidmore teach all the limitations according to claim 4.

Smith further teaches where the geographical data is collected by mapping areas along a path for obstructions that create communication interruptions (column 2, lines 26-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for

processing a communication interruption with Smith's collection of data by mapping the areas of traveled paths in order to have well defined prediction points, as taught by Smith.

Regarding claim 7, Tayloe, Smith and Skidmore teach all the limitations according to claim 4.

Smith further teaches where the enhanced location data is collected by observing communication flow patterns and analyzing them for any communication interruptions (column 2, lines 7-20, 26-37; columns 6-7, lines 65-67 and 1-20, respectively).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Smith's analyzing of the collected data in order to "anticipate connection problems", as taught by Smith.

Regarding claim 8, Tayloe, Smith and Skidmore teach all the limitations according to claim 4.

Smith further teaches where the topographical data is collected by mapping areas along a path for terrain that creates communication interruptions (column 3, lines 1-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Smith's creation of topographical data in order to "anticipate connection problems", as taught by Smith.

Regarding claim 9, Tayloe, Smith and Skidmore teach all the limitations according to claim 4.

Smith further teaches where global positioning system is used to observe the communication patterns and communication obstructions features and combines both to display communication interruption (column 3, lines 1-25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Smith's comparison of data in order to "anticipate connection problems", as taught by Smith.

Regarding claim 17, Tayloe, Smith and Skidmore teach all the limitations according to claim 1. Tayloe further teaches where least one communication device is a wireless communication device operating in conjunction with a wireless communication network having a coverage area (figure 1 and column 2, lines 22-38), the method further comprising the step of: calculating the duration of the interruption prior to the announcement (column 4, lines 3-5; e.g., "the time remaining...before the call is dropped").

Regarding claim 19, Tayloe, Smith and Skidmore teach all the limitations according to claim 1. Tayloe further teaches where the reason for interruption is selected from a group consisting of the communication device has traveled outside a coverage area, due to an indoor obstruction and due to an outdoor obstruction (column 7, lines 56-64 and column 1, lines 28-37).

Regarding claim 28, Tayloe teaches of an intelligent electronic device comprising logic to predict, a communication drop-off for two communication devices in communication (column 3, lines 22-28; e.g., “until an outage is predicted”; where an outage causes communication interruptions; column 3, lines 44-51), calculate a communication drop-off point (column 3, lines 44-51; where the drop-off point is calculated according to the “current position on earth, the relative position of the satellite cells and their size, shape and location...”); and before the drop-off point is reached, notify a user of at least one of the communication devices of the drop-off (column 3, lines 23-29).

Tayloe does not specifically teach of stored data comprising a plurality of predetermined prediction points indicating a fixed structure capable of presenting an interference to the communication in progress; and where a prediction point is separated from an interruption point by a first predetermined time or distance interval, and a second predetermined time or distance interval between the interruption point and a connectivity point defines a no-coverage zone, the communication being capable of being re-established at or beyond the connectivity point outside the no-coverage zone.

Smith teaches of stored data comprising a plurality of predetermined prediction points indicating a fixed structure capable of presenting an interference to the communication in progress; and (column 1, lines 28-40, column 3, lines 37-63; where it can be argued that a device temporarily stores/buffers the coordinates of current locations, “prediction points”, in order to calculate a distance/time of the “interruption point”); and where a prediction point is separated from an interruption point by a first

predetermined time or distance interval (column 1, lines 28-40; column 11, lines 9-23. See also, column 2, lines 26-37; column 3, lines 1-20, 38-57), and a second predetermined time or distance interval between the interruption point and a connectivity point defines a no-coverage zone (column 6, lines 42-54), the communication being capable of being re-established at or beyond the connectivity point outside the no-coverage zone (column 10, lines 29-36). Smith further teaches where the data is stored within the mobile electronic device in at least one of the communication device prior to at least one of the communication devices arriving at one of the plurality of predetermined prediction points (column 11, lines 9-18, where the information is stored "locally" in the "mobile unit").

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's method for processing a communication interruption with Smith's consulting of data regarding position, distance/time before interruption occurs in order to make better usage of resources, as taught by Smith. In addition maintaining the dead zone information in the mobile unit helps the mobile unit to make comparisons with its position and warn and determine the beginning and end of the dead zone.

Although implicitly taught in the Smith reference, the examiner is introducing a related art reference that is more explicit regarding consulting data stored within the electronic device, the data comprising a plurality of predetermined predicting points indicating a fixed structure capable of presenting an interference to the communication in progress, Skidmore presents the teachings regarding this limitation in column 2, lines

26-45, the examiner would like to indicate that there is no detail in the claims as to how the data is stored, therefore the prior references read on the limitations because, information can be stored and consulted).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's and Smith's method for processing a communication interruption with Skidmore's presentation of art that teaches of storing fixed structure data information in order to improve communications.

10. Claims 10-16 and 18, 20 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tayloe in view of Smith and Skidmore as applied to claims 1, 12 and 15 above, and further in view of Amin (Amin et al, US Patent No.: 5,995,830 A).

Regarding claims 10 and 20, Tayloe, Smith and Skidmore teach all the limitations according to claims 1 and 28, respectively.

Tayloe, Smith and Skidmore do not specifically teach where the announcement also contains at least one reason for the communication interruption between the devices.

In related art, concerning a system and method for processing dropped calls, Amin teaches where the announcement also contains at least one reason for the communication interruption between the devices (column 2, lines 8-12; e.g., "may include the reasons that the connection was dropped").

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Amin's message including the reasons

why the connection was dropped in order to “increase the chances that the communication between the users can continue”, as taught by Amin.

Regarding claims 11 and 30, Tayloe, Smith and Skidmore teach all the limitations according to claims 1 and 28, respectively.

Tayloe, Smith and Skidmore do not specifically teach the step of sending a message to the other mobile communication device indicating the reason that the connection to the one communication device has been interrupted.

Amin teaches the step of sending a message to the other communication device indicating the reason that the connection to the one mobile communication device has been interrupted (column 2, lines 8-12; e.g., “may include the reasons that the connection was dropped”).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe’s, Smith’s and Skidmore’s method for processing a communication interruption with Amin’s message including the reasons why the connection was dropped in order to “increase the chances that the communication between the users can continue”, as taught by Amin.

Regarding claims 12 and 32, Tayloe, Smith and Skidmore teach all the limitations according to claims 1 and 28, respectively.

Tayloe, Smith and Skidmore do not specifically teach the step of reconnecting to the one mobile communication device and re-establishing the communication, where the communication is a telephone call.

Amin teaches the step of reconnecting to the one communication device and re-establishing the communication, where the communication is a telephone call (column 2, lines 16-20).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Amin's reconnecting and re-establishing the communication in order to maintain communication between the users, as taught by Amin.

Regarding claim 13, Tayloe, Smith, Skidmore and Amin teach all the limitations according to claim 12.

Amin further teaches the step of sending at least one reconnection indication to the other communication device upon a successful reconnection to the one mobile communication device (column 2 lines 20-23).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Amin's indication to the other device in order to maintain communication between the users, as taught by Amin.

Regarding claim 14, Tayloe, Smith and Skidmore teach all the limitations according to claim 1.

Tayloe, Smith and Skidmore do not specifically teach the step of making at least one attempt to re-establish communication between the two communication devices.

Amin teaches the step of making at least one attempt to re-establish communication between the two mobile communication devices (column 2, lines 13-18).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Amin's attempt to re-establish communication in order to maintain communication between the users, as taught by Amin.

Regarding claim 15, Tayloe, Smith and Skidmore teach all the limitations according to claim 1.

Tayloe, Smith and Skidmore do not specifically teach the step of attempting to reconnect to the one communication device, and if the reconnection fails, connecting the other communication device to another medium.

Amin teaches the step of attempting to reconnect to the one communication device, and if the reconnection fails, connecting the other communication device to another medium (column 2, lines 24-31; e.g., "voice mail").

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Amin's connecting the other communication device to another medium in order to "increase the chances that the communication between the users can continue", as taught by Amin.

Regarding claim 16, Tayloe, Smith, Skidmore and Amin teach all the limitations according to claim 15.

Amin further teaches where the another medium is selected from a group consisting of voice mail, a memory location, audio, data and video (column 2, lines 24-31; where the examiner selected “voice mail” from the choices provided by the applicant).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe’s, Smith’s and Skidmore’s method for processing a communication interruption with Amin’s voice mail medium in order to maintain communication in a different manner.

Regarding claim 18, Tayloe, Smith and Skidmore teach all the limitations according to claim 1.

Tayloe, Smith and Skidmore do not specifically teach where at least one communication device is a wireless communication device operating in conjunction with a wireless communication network having a coverage area, the method further comprising the step of: determining the reasons for the connection interruption.

Amin teaches where at least one communication device is a wireless communication device operating in conjunction with a wireless communication network having a coverage area, the method further comprising the step of: determining the reasons for the connection interruption (column 2, lines 8-12; e.g., “the reasons that the connection was dropped”).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe’s, Smith’s and Skidmore’s method for processing a communication interruption with Amin’s determination of the reasons why

the connection was dropped in order to inform the users about them; thus, “increase the chances that the communication between the users can continue”, as taught by Amin.

Regarding claim 20, Tayloe, Smith and Skidmore teach all the limitations according to claim 1.

Tayloe, Smith and Skidmore do not specifically teach where at least one communication device is a wireless communication device operating in conjunction with a wireless communication network having a coverage area, the method further comprising the step of connecting the other communication device to voice mail without attempting to reconnect to the wireless communication device.

Amin teaches where at least one communication device is a wireless communication device operating in conjunction with a wireless communication network having a coverage area, the method further comprising the step of: connecting the other communication device to voice mail without attempting to reconnect to the wireless communication device (column 2, lines 32-42 and column 5, lines 47-50).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe’s, Smith’s and Skidmore’s method for processing a communication interruption with Amin’s connecting the other communication device to voice mail without attempting to reconnect in order to “increase the chances that the communication between the users can continue”, as taught by Amin.

11. Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Tayloe in view of Smith and Skidmore further in view of Ashby et al. (Ashby, US006047280A).

Regarding claim 33, Tayloe, Smith and Skidmore teach all the limitations according to claim 1.

Tayloe, Smith and Skidmore do not explicitly teach where the prediction points are set and stored by a manufacturer of the one of the communication devices.

In related art concerning an interface layer for navigation system, Ashby teaches where the prediction points are set by a manufacturer of the one of the mobile communication devices (columns 2 and 3, lines 24-29 and 20-26, respectively; where it is not clear as to where the prediction points are stored; therefore, they can be stored anywhere within the system or outside the system).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Smith's and Skidmore's method for processing a communication interruption with Ashby's manufacturer's set data in order to develop efficient geographical information systems that can predict obstructions and facilitate navigation.

Regarding claim 34, Tayloe, Smith and Skidmore teach all the limitations according to claim 1. Ashby further teaches where the prediction points are programmed by a subscriber associated with the one of the mobile communication devices and stored in the communication device (columns 2, 3 and 5, lines 24-29 and 20-26, respectively, where the "end-user" updates the "geographic data" in the "user's navigation system").

Regarding claim 35, Tayloe, Smith and Skidmore teach all the limitations according to claim 33. Ashby further teaches where the prediction points set by the manufacturer can be adjusted by a subscriber (columns 2, 3 and 5, lines 24-29 and 20-26, respectively, where the “end-user” updates the “geographic data” in the “user’s navigation system”; where the “geographic data” containing the prediction points can be modified by the user by adding new information).

Regarding claim 36, Tayloe, Smith and Skidmore teach all the limitations according to claim 34. Ashby further teaches where the prediction points programmed by the subscriber can be adjusted (columns 2, 3 and 5, lines 24-29 and 20-26, respectively, where the “end-user” updates the “geographic data” in the “user’s navigation system”).

Conclusion

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Angelica Perez whose telephone number is 571-272-7885. The examiner can normally be reached on 7:00 a.m. - 3:30 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either the PAIR or Public PAIR. Status information for unpublished applications is available through the Private PAIR only. For more information about the pair system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

Application/Control Number:
09/900,773
Art Unit: 2618

Page 23

/P. M. A./

Examiner, Art Unit 2618

/Duc Nguyen/

Supervisory Patent Examiner, Art Unit 2618